

CLAIMS

1. A detector (6) of articles (1) comprising a contactless label (2) of the RFID type, the said detector comprising at least one antenna (13) formed of N loops and M turns, M and N being integers greater than or equal to 1, characterized in that at least one of the said turns consists of at least two complementary segments (12), the two segments (12) not being coplanar, that is to say that the addition of the other segment, starting from the ends of one of the segments, constitutes a turn, and each one is present on one of two different substrate layers (7, 8, 9, 10, 11).

2. The detector (6) as claimed in claim 1, characterized in that at least one of the turns of the antenna (13) is constituted by at least two segments (12) extending in different planes.

3. The detector (6) as claimed in claim 2, characterized in that the planes in which the two said segments (12) extend are parallel with each other.

4. The detector (6) as claimed in claim 2 or 3, characterized in that the ends of each of two consecutive segments (12) are connected to each other by a bridge (14).

5. The detector (6) as claimed in claim 4, characterized in that the connection between the ends of the segments (12) is such that the said antenna (13) exhibits N loops with 1 turn.

6. The detector (6) as claimed in claim 4, characterized in that the connection between the ends of the segments (12) is such that the said antenna (13) exhibits 1 loop with N turns.

7. The detector (6) as claimed in claim 4, characterized in that the said bridge (14) extends perpendicular to the planes of the said segments (12) of turn.

8. A system for the identification of articles (1) comprising contactless labels (2) of the RFID type, comprising an intermediate element (3) and an antenna (13) formed from several turns, characterized in that at least one of the said turns is constituted by at least two complementary segments (12), the two segments (12) not being coplanar, and in that the said intermediate element (3) comprises a thin casing (4) comprising an electrical circuit (5).

9. The system as claimed in claim 8, characterized in that the said antenna (13) is contained in a substantially parallelepipedic card, having two large parallel faces (17).

10. The system as claimed in claims 8 and 9, characterized in that the said electrical circuit (5) extends in a plane substantially perpendicular to the planes of the said large parallel faces (17) of the card.

11. The system as claimed in one of claims 8 or 9, characterized in that the said electrical circuit (5) extends parallel with the contactless label (2) of the RFID type of the article (1).

12. The system as claimed in claim 8, characterized in that the said articles (1) are disposed substantially parallel with respect to each other.

13. The system as claimed in claim 8, characterized in that the articles (1) are disposed close to each other, at a distance of less than 40 millimeters (mm), preferably a distance of less than 15 mm.

14. The system as claimed in claim 8, characterized in that the said antenna (13) is tuned, with an impedance of 50 Ω (Ohms) and with zero phase shift, to the frequency of 13.56 MHZ (Megahertz).

15. A method of manufacture of a detector as claimed in any one of claims 1 to 6, characterized in that it comprises the following steps:

- production of at least one electrical conductor segment (12) on a plurality of substrates respectively (7, 8, 9, 10, 11),

- multi-layer assembly of the said substrates (7, 8, 9, 10, 11).

16. The method as claimed in claim 15, characterized in that it comprises a step of production of

connection, or bridging, between the different segments (12) of each of the substrates (7, 8, 9, 10, 11).